

U.S. Pat. Appl. Ser. No. 10/590,236
Attorney Docket No. 10191/2836
Reply to Office Action of April 21, 2009

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13. (Canceled).

14. (Currently Amended) The power device according to claim [[13]] 18, wherein the power supply device is in a vehicle electrical system.

15. (Currently Amended) The power supply device according to claim [[13]] 18, wherein the connecting device establishes a conducting connection at least temporarily between the excitation winding of the second generator and the charge storage device.

16. (Currently Amended) The power supply device according to claim [[13]] 18, wherein the connecting device establishes a conducting connection after actuation of the ignition switch, at least until starting of the second generator.

17. (Canceled).

18. (Currently Amended) A [[The]] power supply device comprising:
a first voltage system including at least one first generator, according to claim 17
which a first voltage regulator is assigned;

a charge storage device connected to the first generator and consumers switchable to
the charge storage device via an ignition switch;

a second voltage system including at least one second generator, to which a second
voltage regulator is assigned, as well as switchable consumers, the second voltage regulator
regulating an excitation current flowing through an excitation winding of the second
generator; and

at least one connecting device situated between the excitation winding of the second
generator and the charge storage device for connecting the excitation winding of the second
generator to the charge storage device for generating the excitation current in the excitation
winding of the second generator, wherein the connecting device includes a bidirectional
d.c./d.c. voltage transformer.

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19. (Currently Amended) The power supply device according to claim 18, wherein: one side of the voltage transformer is at a first ~~second~~ generator voltage in a range of 12-14 volts; and

the other side is at a second [[first]] generator voltage, ~~the voltages being different, and in a range of one of 12-14 volts and 36-42 volts.~~

20. (Currently Amended) A [[The]] power supply device comprising:
a first voltage system including at least one first generator, according to claim 17
which a first voltage regulator is assigned;

a charge storage device connected to the first generator and consumers switchable to
the charge storage device via an ignition switch;

a second voltage system including at least one second generator, to which a second
voltage regulator is assigned, as well as switchable consumers, the second voltage regulator
regulating an excitation current flowing through an excitation winding of the second
generator; and

at least one connecting device situated between the excitation winding of the second
generator and the charge storage device for connecting the excitation winding of the second
generator to the charge storage device for generating the excitation current in the excitation
winding of the second generator, wherein the connecting device includes at least one diode
and a resistor, an anode of the diode being connected to the charge storage device battery and
a cathode being connected to the excitation winding of the second generator.

21-22. (Canceled).

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23. (Currently Amended) A [[The]] power supply device ~~according to claim 13,~~
~~further comprising:~~

a first voltage system including at least one first generator, to which a first voltage regulator is assigned;

a first charge storage device connected to the first generator and consumers switchable to the battery via an ignition switch;

a second voltage system including at least one second generator, to which a second voltage regulator is assigned, as well as switchable consumers, the second voltage regulator regulating an excitation current flowing through an excitation winding of the second generator;

a second an additional charge storage device connectable to the excitation winding of the second generator, the second additional charge storage device being one of a battery, a capacitor and a SuperCap; [.,.] and

at least one connecting arrangement for connecting the excitation winding of the second generator to the second charge storage device for generating the excitation current in the excitation winding of the second generator, the [[a]] connection being established after actuation of the ignition switch and maintained until the second generator has started and is supplying an output voltage.

24. (Canceled).

25. (Currently Amended) The method according to claim [[24]] 32, wherein power is supplied in a vehicle electrical system.

26. (Currently Amended) The [[A]] method for power supply in a power supply device including at least one connecting device for connecting an excitation winding of a second generator to a charge storage device for generating an excitation current in the excitation winding of the second generator, the at least one connecting device including at least one switch of claim 32, further the method comprising:

keeping the switch closed and operating [[a]] the first generator and the second generator in parallel for joint supply of power to one of first and second voltage systems.

27. (Currently Amended) The method according to claim [[26]] 33, wherein power is supplied in a vehicle electrical system.

28. (New) The power device according to claim 20, wherein the power supply device is in a vehicle electrical system.

29. (New) The power device according to claim 23, wherein the power supply device is in a vehicle electrical system.

30. (New) The power supply device according to claim 20, wherein the connecting device establishes a conducting connection at least temporarily between the excitation winding of the second generator and the charge storage device.

31. (New) The power supply device according to claim 20, wherein the connecting device establishes a conducting connection after actuation of the ignition switch, at least until starting of the second generator.

32. (New) A method for power supply in a power supply device, the power supply device including: a first voltage system including at least one first voltage generator, to which a first voltage regulator is assigned; a charge storage device connected to the first generator, consumers switchable to the charge storage device via an ignition switch; a second voltage system including at least one second generator, to which a second voltage generator is assigned, as well as switchable consumers, the second voltage regulator regulating an excitation current flowing through an excitation winding of the second generator; and at least one connecting device situated between the excitation winding of the second generator and the charge storage device for connecting the excitation winding of the second generator to the charge storage device, the at least one connecting device including at least one diode and a resistor, an anode of the diode being connected to the charge storage device and a cathode being connected to the excitation winding of the second generator, the method comprising:

establishing a connection of the second voltage system to the first voltage system via the diode and resistor; and

terminating the connection when a voltage of the second generator exceeds a voltage of the first generator.

33. (New) A method for power supply in a power supply device, the power supply device including: a first voltage system including at least one first voltage generator, to which a first voltage regulator is assigned; a charge storage device connected to the first generator, consumers switchable to the charge storage device via an ignition switch; a second voltage system including at least one second generator, to which a second voltage generator is assigned, as well as switchable consumers, the second voltage regulator regulating an excitation current flowing through an excitation winding of the second generator; and at least one connecting device situated between the excitation winding of the second generator and the charge storage device for connecting the excitation winding of the second generator to the charge storage device, the at least one connecting device including a bidirectional d.c./d.c. voltage transformer, the method comprising:

supplying an excitation current to the second generator from the charge storage device via the connecting device.